

CIVIL AIR PATROL
SAN DIEGO CADET
SQUADRON 144

SPECIAL
POINTS OF
INTEREST:

- Check out up-coming events on Page 2
- Explore Cadet Programs on Page 1—3
- Meet your cadet staff on Page 3
- Learn about aerospace current events on Pages 4 & 5
- Achievements and Accomplishments on Page 7

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Squadron 144



News



VOLUME 1, ISSUE 3

SAN DIEGO CADET SQUADRON 144

Non-Commissioned Officer School 2010

Overview of NCOS

By: Capt Ross Veta
NCOS Observer



On October 24-26 Cadets from Squadron 144 participated in the California Wing Noncommissioned Officer School. NCOS was held at March Air Reserve Base near Riverside. NCOS is a school offered to Cadets airman first class or above and provides valuable training in NCO Roles and Responsibilities, Leadership,

Self Reliance, Drill and Ceremonies, and Presentations and Public Speaking. All of our Cadets graduated with flying colors and now bring their new skills and experiences back to enhance our Squadron. Squadron 144 Cadets attending this NCOS were: Calvin Amos, Everett Costello, Bryce Duggan, Zoe Horton, Andrew Overson, Benjamin Shea, Naomi Shea, Rebekah Shea, Sarah Shea, Rebecca Thieme (instructor), and Jacob Veta. Congratulations and thanks to those who attended. As always Squadron 144 Cadets stood out and performed with enthusiasm!



Staff Perspective

By: C/2nd Lt Benjamin Shea
Kilo Seminar Leader, NCOS South 2010

Only once a year is there a chance for NCOs in the wing of California to build and enhance their leadership skills and



styles in order to become our future leaders. During this annual event took place once again as over 70 sergeants showed up in order to accomplish that very goal - becoming Civil Air Patrol's future leaders, 'for those who follow'. At an NCOS there are no flight commanders or squadron commanders, there are simply Seminar Leaders and at times Assistant Seminar Leaders. The primary role of the Seminar Leader is to develop a sense of basic NCO skills in the minds of various cadets that are new or in the becoming of NCOs. Mostly, the Seminar Leaders will sit back and let the cadets

(sergeants) take charge of the flight and only step in when there is an eminent threat to the well being of the cadets or if the training is taking place in a false or incorrect manner. By this method of training, cadets will not become NCOs over the course of a training weekend, however they will develop the general sets of skills needed to jump start their NCO careers thanks to the seminar leaders and other staff at this past Non-Commissioned Officer's School including our fearless leader, C/2nd Lt. Rachel Khat-tar, the Cadet Commander.

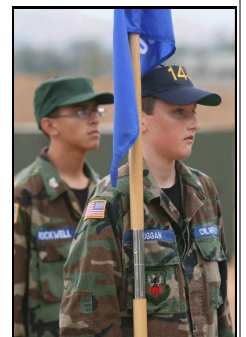


Photo Credit: 1stLt Heidi Olson

Upcoming Events

- ⇒ November 2010
NCSAs Announced
Apply by January 15, 2011
Cost—Varies for each activity
- ⇒ November 6-7, 2010
6th Annual Astronomy Night
Near Campo, CA
Cost - Potluck
- ⇒ November 12-14, 2010
California Wing Conference
Santa Maria, CA
Cadet Cost w/Banquet \$60, w/o \$30
- ⇒ November 20, 2010
Orientation Rides
Gillespie Field, El Cajon
Cost—FREE
- ⇒ December 11, 2010
Tour of Classic Rotors Museum
Ramona, CA
Cost—FREE
- ⇒ December 26, 2010-January 2, 2010
Cadet Officers Basic Course/RCLS
Naval Air Station Leemore, CA
Cost:: \$140 plus meals (approx. \$77)

NOVEMBER 2010

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2 Weekly Meeting	3	4	5	6 Astronomy Night →
7 Astronomy Night	8	9 Weekly Meeting	10	11 Veterans Day	12 CAWG Conference →	13
14 CAWG Conference	15	16 Weekly Meeting	17	18	19	20 O-Rides
21	22	23 NO MEETING	24	25 Thanks-giving	26	27
28	29	30 Weekly Meeting				

National Cadet Special Activities

By: 1stLt Sonya Petty

Every November cadets get excited and the word spreads around that there is something new to do in CAP. It's not encampment, not another bivouac, but the National Cadet Special Activities (NCSA). These are activities that take place during the summer months (with a few exceptions) and allow the cadets to get more training in the specific fields they are interested in with cadets from all over the nation. The variety of NCSAs offered by CAP gives cadets a diverse experience. Activities focus on career exploration, leadership development, search and rescue skills, aeronautical training, Air Force familiarization, government, and a variety of other topics.

To attend these events, cadets must have completed a basic encampment prior to the start of the activity. Each NCSA has its own age and rank requirements so make sure you double check this before you apply. Starting the application process is relatively simple—file an application on the

e-Services website which will be approved by the Squadron Commander. Want to do more than one activity—go ahead! Be sure to rank what you want to do in order of choice—high to low.

As a sneak peak, here are a few activities that are offered every year and may be of interest to you:

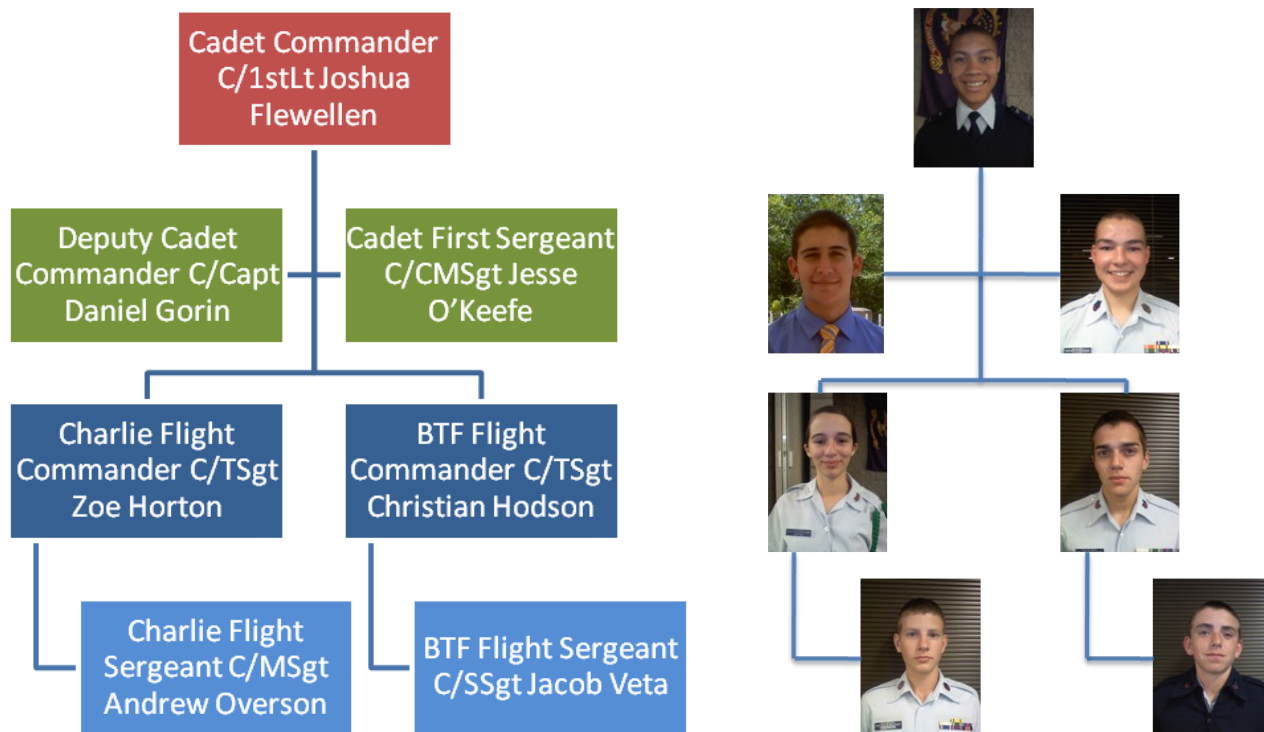
- ⇒ National Emergency Services Academy (NESA): Get your ground team member qualification
- ⇒ Hawk Mountain Ranger School: Learn survival skills in this living off the land adventure
- ⇒ National Blue Beret (NBB): Work the flight line at the EAA Airventure in Oshkosh, Wisconsin
- ⇒ Cadet Officer School (COS): Learn what it really takes to be a better officer with a hands-on approach to leadership

- ⇒ International Air Cadet Exchange (IACE): For cadets who have attained their Earhart Award and age 17 you can spend two weeks in a foreign country experiencing the word as a representative of the USA



Interim Cadet Chain of Command

It is with sad hearts that Squadron 144 must bid farewell to the Shea Family Cadets—C/2nd Lt Rebekah Shea, C/2nd Lt Benjamin Shea, C/2nd Lt Sarah Shea, and C/TSgt Naomi Shea—as they move to Alabama. We wish you all the best in your future endeavors. With this news, an interim Cadet Chain of Command has been established until the new Cadet Commander for next year is established through normal proceedings with a formal Change of Command Ceremony at the January Squadron Banquet. The interim structure is:



Getting to Know Your Interim Cadet Deputy Commander

By: C/Capt Daniel Gorin

Away from Civil Air Patrol meetings, Daniel Gorin is a senior in high school and an avid athlete. At Poway High School, Daniel is a member of numerous clubs and organizations such as the National Honor's Society and the Ping Pong Club. After six long hours in the classroom each day, Daniel throws on a pair of running shoes and heads off to cross country practice where he does what he can to keep up through the grueling workouts. Upon the conclusion of practice, he makes his way home to catch up on some school work. During the spring season, cross country is replaced with three hours of lacrosse

practice each day. Over the summer, Daniel attained his Private Pilot's License and is currently working on attaining various additional endorsements. After high school, Daniel seeks admittance into the Air Force Academy or another university with an Air Force ROTC program where he looks to study Aerospace Engineering. Civil Air Patrol has been a great inspiration for Daniel; not only has it helped him find a career path, but also a passion for leadership. Daniel encourages all the cadets of Squadron 144 to progress in the program and to gain the outstanding training and experiences that it offers.



Aerospace—Helicopters to Heliplanes

By: C/CMSgt Jesse O'Keefe; Images provided by ©2010 Challis Heliplanes



Helicopters are always something that have captured the attention of many scientists, inventors, and innovators throughout the history of aviation. Leonardo da Vinci experimented with a flying machine that somewhat resembles the modern helicopter, and now that it is a reality it seems that the ability to improve this invention is only limited by science. New breakthroughs are happening all the time to improve the helicopter, yet one limitation for years, has been the retreating blade stall problem.

The rotors on most American helicopters spin counter-clockwise when viewed from overhead. This means that, even at a standstill, the blade on the left, known as the retreating blade, is retreating relative to the rotor shaft. This does not make any difference when the helicopter is standing still, because both blades are still producing

the same amount of lift. However, if the helicopter started to move forward, then the airflow velocity over the advancing blade would be increased by the amount of the forward speed; whereas the retreating blade is being reduced by the amount of forward speed. So let's say that a helicopter is flying at 100 MPH. The airflow over the advancing blade would be;

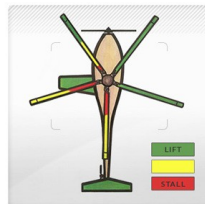
Velocity induced by the blades turning: 300MPH

Plus the velocity of flight: +100MPH

Total velocity of advancing blade at the tip: 400MPH

Is this a problem for the other blade?

YES! This means that:



Velocity induced by the blades turning: 300MPH

MINUS the velocity of flight: -100MPH

Total Velocity of retreating blade at the tip: 200MPH

With each blade at a 200 MPH difference, without correction this would flip the helicopter over towards the retreating blade side, because there is over twice the lift difference between sides.

This has been a huge limitation in helicopter flight, but look out, because here come the people who think outside the box. The Challis Heliplane concept corrects this problem of lift difference, by adding a wing on the side of the retreating blade. And in doing so, they correct for the amount of lift lost when traveling forward. Also, to keep the heliplane from having to angle forward to produce forward movement, the engineers at Challis added a front propeller that engages at flying speeds, which keeps the helicopter flying level, instead of the extreme pitch angle required to reach cruise speed.

Watch an animated demonstration at <http://www.challis-heliplane.com/v3/animation.php>

"Aerodynamically, the bumble bee shouldn't be able to fly, but the bumble bee doesn't know it so it goes on flying anyway."

~Mary Kay Ash

The STS-133 crew members, from the left, are NASA astronauts Alvin Drew and Nicole Stott, both mission specialists; Eric Boe, pilot; Steve Lindsey, commander; Michael Barratt and Tim Kopra, both mission specialists.

Image credit: NASA



Space Shuttle Discovery Set to Launch 3-November

Compiled By: 1st Lt Sonya Petty; Information provided by NASA

Set to launch November 3rd, space shuttle Discovery will deliver and install the Permanent Multipurpose Module, the Express Logistics Carrier 4 and provide critical spare components to the International Space Station. This will be the 35th shuttle mission to the station and will be operating as STS-133. Currently, there is only one more mission scheduled after STS-133. It will be made by space shuttle Endeavor.

For Civil Air Patrol, one of the key elements of this mission is that the pilot, Eric Boe, is a former Cadet and now a Senior Member in Florida Wing. During an interview with NASA, the following question was asked: Every accomplishment begins

with some kind of motivation.

You've been an astronaut for about ten years. Tell us what motivated you to pursue this line of work out of all the things out there that were possible.

Eric responded: Well, what motivated me to be an astronaut, probably the first thing that I can remember as a kid is I remember my parents calling me in, in 1969, to watch a black and white TV showing of the first moon landing and I was five at the time. I don't remember a whole lot, but I do remember as I got older, the emphasis they put on it and as I got older I thought about, what a neat endeavor that humans had participated in, actually walk on

something that you look at often in the night sky...And I was also very interested in aviation as a kid and so I was involved in a group called Civil Air Patrol which is very active with the Air Force and flying and doing a lot of other activities, so that kind of spurred on my inspiration to do flying. I went to the Air Force Academy after that and I was interested in being a fighter pilot, one of my goals and got to do that for a while, so those kinds of inspirations along the way and the doors kept opening and the opportunity presented itself where I was a test pilot at the time and I was still interested in being an astronaut so I applied and was lucky enough to be selected.

Learning from Mistakes—A Day at the Beach



Article By: Bo Hendriksson; Full Article Available at: http://www.avweb.com/news/airman/learning_from_mistakes_197868-1.html

I'm assigned to fly a Cheetah on one of my favorite routes, which will take me from Raleigh, N.C., to Wilmington and the North Carolina coast, back to Raleigh, then on to Roanoke, Va., before returning to Raleigh to finish the day. The morning brings the promise of a beautiful summer day, confirmed by the forecast I get from the briefer at the Raleigh Flight Service Station.

The reason I like this trip is that there is a long sit in Wilmington. Fortunately, the company has left a rattletrap car for us to use, and I spend the down time at the beach working on my tan. In KRDU it's a quick turn, where I offload the bags before I continue on to Roanoke. A quick mental calculation tells me that I have enough fuel for the trip there plus the requisite IFR reserves. No sweat.

But half an hour later, I am indeed sweating. The Roanoke ATIS is calling it right at the minimums for the LDA RWY 6 approach, the lowest one available. Somehow fog has formed in the valleys and it's not local, either: Lynchburg, 40 nm to the east, is calling for the same conditions. It, however, has

an ILS with lower minimums. I am now faced with a dilemma. Because the Roanoke forecast I received early in the day called for good weather, I hadn't planned for an alternate. I can reach Roanoke and hold for 45 minutes, but then I wouldn't have enough fuel to proceed to an alternate. For a minute I play with the idea to going directly to Lynchburg, but Roanoke is closer, so I elect to proceed there. If I go missed at Roanoke, I will immediately turn towards Lynchburg and land there.

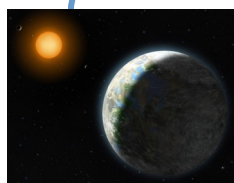
The controllers give me a big U-turn onto the localizer. At least the setting sun is on my back so I won't be staring into it on the approach. I slow the Cheetah more than I normally do and remind myself to look left at decision height to find the landing runway. But at minimums, I have no luck. I climb away and advise tower of the missed. Suddenly, there's a break in the clouds and I see that I'm right over the runway. I get a hurried new landing clearance and sideslip the airplane to get down, using up almost every inch of the pavement.

The wet air feels refreshing as I slowly taxi to the FBO.

Conclusion: I failed to get an update on the Roanoke weather, assuming it was still OK, because the TAF indicated so earlier. As a former Air Force meteorologist, I, of all people, should have had the sense to know how finicky the weather in the mountains can be.

I have seen this in myself and in others since then, especially in pilots flying slow airplanes where one doesn't cover much distance on each leg. After a couple of sunny hours on the beach, my mind was subconsciously programmed to take for granted that this would last for the rest of the day and flight.

I've also revised my personal fuel reserves, realizing that the FAA-mandated ones are just that -- minimums. I don't plan to ever land with less than an hour in the tanks, irrespective of the circumstances. Worse weather mandates more padding and this has done wonders for my ulcer.



Gliese 581 g is thought to orbit in the middle of its star's habitable zone, meaning liquid water could exist on the planet's surface. Credit: Lynette Cook

Perfectly Habitable Planet? Gliese 581 g

By: 1st Lt Sonya Petty; Information Provided by Astrobiology Magazine

Last month, astronomers announced the discovery of the first potentially habitable extrasolar planet. But this week at an International Astronomical Union meeting, doubts were raised about the existence of this exciting new planet said to be orbiting the star Gliese 581. Called 'Gliese 581 g,' the planet was determined to be about 3 times the mass

of Earth, meaning it was a rocky world, not a gas giant like Jupiter. Rocky extrasolar planets have been found before, but the unique trait about this planet was that it orbited within the red dwarf star's habitable zone, that region of space where temperatures are sufficient for water to remain as a liquid on a planetary surface. The star Gliese 581 is 20 light years away

from Earth, located in the constellation Libra.

Some doubt over its existence has been cast in recent weeks. The planet is only able to be seen as a dark spot against the surface of its' version of the sun. Additional searches by other astronomers just can't find it. Stay tuned for more information on the "perfectly habitable planet".

SpaceShipTwo Completes First Manned Glide Flight

Article Excerpt from <http://www.virgingalactic.com>

10th October 2010, Mojave, CA. Virgin Galactic, the US company developing the world's first commercial manned space flight system and tourism business, is delighted to announce the successful completion today of the first piloted free flight of SpaceShipTwo, named the VSS Enterprise. The spaceship was released from its mothership at an altitude of 45,000 ft (13,700 metres).

During its first flight the spaceship was piloted by Pete Siebold, assisted by Mike Alsbury as co-pilot. The two main goals

of the flight were to carry out a clean release of the spaceship from its mothership and for the pilots to free fly and glide back and land at Mojave Air and Space Port in California.

Other detailed objectives of the flight were successfully completed, including; verification that all systems worked prior and following the clean release of Enterprise; initial evaluation of handling and stall characteristics; qualitative evaluation of stability and control of SS2 against predictions from design and simulation work;

verification of performance by evaluating the lift-to-drag ratio of the spaceship during glide flight; practice a landing approach at altitude and finally descend and land.

Continue reading this story at: <http://www.virgingalactic.com/news/item/vss-enterprise-completes-first-manned-glide-flight/>



SpaceShipTwo, named the VSS Enterprise, being launched from the WhiteKnightTwo mothership, Eve on 10 Oct.

Miramar Air Show Recruiting Event

By: 1stLt Sonya Petty



The Miramar Air Show was a roaring success on October 1st through 3rd. CAP Squadron 57 provided a Cessna 206 to sit on static display behind Grandstand 5. Squadron 144 with the help of cadets from Squadron 714 stood guard of the airplane and manned the recruiting booth Friday morn-

ing through Sunday afternoon. Despite poor weather Friday and Sunday, searing heat on Saturday, and huge traffic problems, the recruiting booth provided information to over 275 people interested in joining CAP throughout California. As an added bonus, those who worked the booth or showed off the CAP uniform and browsed the air show were rewarded with stellar performances from the Blue Angels, the Canadian Snow Birds acrobatic team, the F-22 Raptor, the V-22 Osprey, and much more. It was a rewarding experience and hopefully brought many new faces to CAP Squadrons all over California!

Group 7 Awards Banquet

By: Capt Ross Veta

October 9, 2010 was an important date for Squadron 144 at the Group 7 Awards Banquet. The Banquet was held at the Camp Pendleton NCO Club where attendees enjoyed a sumptuous dinner and excellent program. Retired Navy Captain and aviator Rick Ludvig gave a presentation about his experiences in the Navy, and insight into the future of unmanned air vehicles. Squadron 144 took top honors at the Banquet being awarded Group 7 Cadet Squadron of the year. Benjamin Shea was also awarded Cadet Non-Commissioned Officer of the year for the Group, and Captain Jeff Cable was awarded the Grover Loening Award. Congratulations to all and good luck at wing level!



SAFETY

Hypothermia 101

By: Capt Chris Natwick



With thoughts turning toward Thanksgiving, the rolling back of clocks, and the upcoming winter season it is important to remind ourselves on the dangers of hypothermia. What is hypothermia? What conditions need to exist for hypothermia to take place? Can hypothermia kill you? These and other questions will be answered in this month's installment of the Safety corner.

What is hypothermia: Hypothermia is a medical condition when your body loses heat faster than the body can produce heat. Hypothermia can take place once your body temperature falls below 95°F.

Conditions for Hypothermia: Exposure to cold weather or your body being immersed in cold water. For older people hypothermia can take place indoors in improperly heated homes.

Seriousness of Hypothermia: Hypothermia can cause death if untreated. Hypothermia affects the body's nervous system, heart, and other important organs. If hypothermia is left untreated, hypothermia will cause the failure the heart and respiratory system.

Symptoms of Hypothermia: Shivering, clumsiness or lack of coordination, slurred speech or mumbling, stumbling, confusion or difficulty in thinking, poor decision making, drowsiness or very low energy, apathy or lack of concern of one's position, weak pulse, and shallow breathing.

Treatment for Hypothermia: The following First Aid treatments are recommended by the Mayo Clinic. More information can be found at www.mayoclinic.com:

Be gentle. When you are helping a person with hypothermia, handle him or her gently. Limit movements to only those that are necessary. Don't massage or rub the person. Excessive, vigorous or jarring movements may trigger cardiac arrest.

Move the person out of the cold. Move the person to a warm, dry location if possible. If you're unable to move the person out of the cold, shield him or her from the cold and wind as much as possible.

Remove wet clothing. If the person is wearing wet clothing, remove it. Cut away clothing if necessary to avoid excessive movement.

Cover the person with blankets. Use layers of dry blankets or coats to warm the person. Cover the person's head, leaving only the face exposed.

Insulate the person's body from the cold ground. If you're outside, lay the person on his or her back on a blanket or other warm surface.

Monitor breathing. A person with severe hypothermia may appear unconscious, with no apparent signs of a pulse or breathing. If the

person's breathing has stopped or appears dangerously low or shallow, begin cardiopulmonary resuscitation (CPR) immediately if you're trained.

Share body heat. To warm the person's body, remove your clothing and lie next to the person, making skin-to-skin contact. Then cover both of your bodies with blankets.

Provide warm beverages. If the affected person is alert and able to swallow, provide a warm, nonalcoholic, non-caffeinated beverage to help warm the body.

Use warm, dry compresses. Use a first-aid warm compress (a plastic fluid-filled bag that warms up when squeezed), or a makeshift compress of warm water in a plastic bottle or a dryer-warmed towel. Apply a compress only to the neck, chest wall or groin. Don't apply a warm compress to the arms or legs. Heat applied to the arms and legs forces cold blood back toward the heart, lungs and brain, causing the core body temperature to drop. This can be fatal.

Don't apply direct heat. Don't use hot water, a heating pad or a heating lamp to warm the person. The extreme heat can damage the skin or induce cardiac arrest.

MOST IMPORTANTLY: Call 911 and get advanced medical support for the victim.



Citizens Serving Communities
Above and Beyond

Civil Air Patrol

San Diego Cadet Squadron 144

Direct questions, comments, and submissions to:

1st Lt Sonya Petty

Phone: 918-361-6730

E-mail: smmrinkrat@yahoo.com

For more information about CAP visit:

<http://www.gocivilairpatrol.com>

<http://www.capmembers.com>

<http://capnhq.gov>

Civil Air Patrol

Citizens Serving Communities:

Above and Beyond

Civil Air Patrol was founded in December 1941, one week before the Japanese attack on Pearl Harbor, by more than 150,000 citizens who were concerned about the defense of America's coastline. Under the jurisdiction of the Army Air Forces, CAP pilots flew more than one-half million hours, were credited with sinking two enemy submarines and rescued hundreds of crash survivors during World War II. On July 1, 1946, President Harry Truman established CAP as a federally chartered benevolent civilian corporation, and Congress passed Public Law 557 on May 26, 1948. CAP was charged with three primary missions – aerospace education, cadet programs and emergency services. With the passage of Public Law 106-398 in October 2000, Congress provided that "The Civil Air Patrol is a volunteer civilian auxiliary of the Air Force when the services of the Civil Air Patrol are used by any department or agency in any branch of the federal government."

<http://www.sq144.com/>

Achievements & Accomplishments

October Promotions:

- Joshua Flewellen was promoted to C/Capt
- Sarah Shea was promoted to C/2nd Lt
- Everett Costello was promoted to C/SSgt
- Jacob Veta was promoted to C/SSgt
- Lauren Munzenmaier was promoted to C/Amn

October Accomplishments:

- Squadron 144 received the Group 7 Cadet Squadron of the Year Award

- C/2nd Lt Benjamin Shea received the Group 7 NCO of the Year Award
- 1st Lt Russell Wesley received the Group 7 Aerospace Education Officer of the Year Award
- Capt Jeff Cable received the Grover Loening Award
- 1st Lt Heidi Olson was awarded a Commanders Commendation
- C/1st Lt Chandra Murphy was awarded a Commanders Commendation
- C/Maj Joseph Connolly was awarded a Commanders Commendation
- Kaylin Munzenmaier officially

joined Squadron 144

- Congratulations to the cadets who graduated from NCOS
- Congratulations to all of the cadets who have now completed the written portion of Redstone and Titan Phase of the Model Rocketry Program

Special thanks to:

- Cadets and Seniors from Squadron 144 and 714 for their efforts at the Miramar Air Show Recruiting Event

*Did we miss a promotion, achievement, or accomplishment?
Send submissions to 1stLt Sonya Petty no later than three days before the end of the month.*